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An Inaugural Dissertation  
on  
Cholera Infantum  
by  
Edward Swain  
Pennsylvania.

1841. March 2. 1842.  
1841. 1842.

At Longmont, Colorado

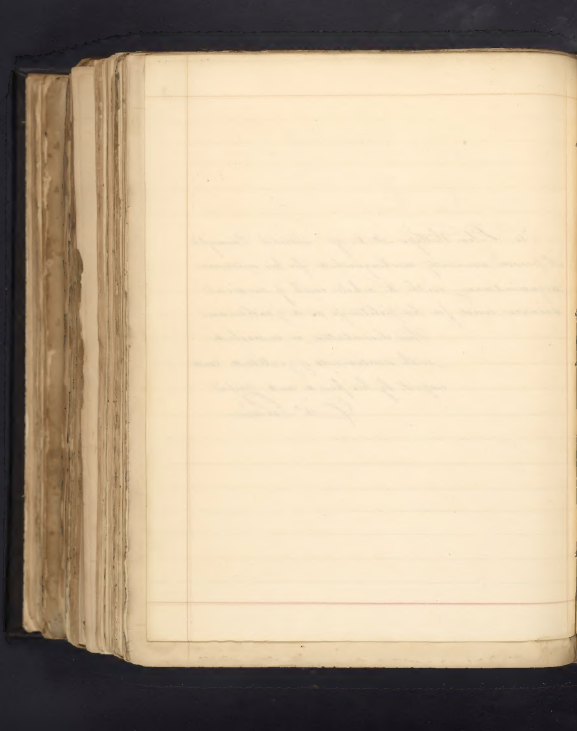
Charles F. Johnson

1841. 1842.

Longmont, Colorado

To John Phillips M.D. of Bristol Penna.  
 A person eminently distinguished for his extensive  
 acquaintance with the whole circle of medical  
 science, and for his politeness as a gentleman.

This dissertation is inscribed  
 with sentiments of gratitude and  
 respect, by his friend and pupil  
 Ed<sup>d</sup> Loring.



To the Medical Professors  
of the University of Pennsylvania

Impressed with all the esteem and respect that a pupil can feel for his teachers conscious of your unremitting zeal to inspire your pupils with a taste for study and observation,

Permit me in leaving the school where I have had the honor to finish my medical education, to return you my warmest acknowledgements for the useful information I have received from your valuable lectures and believe me sir I shall ever bear a lively recollection of the pleasure with which I attended you.

To your reputation as men of science I can add nothing; the high estimation of the University is sufficient to distinguish you as worthy professors, justly meriting honor and respect.

Gentlemen  
Your very humble servant  
Ed<sup>d</sup> Davis

Guzzey and Black. Comp. View

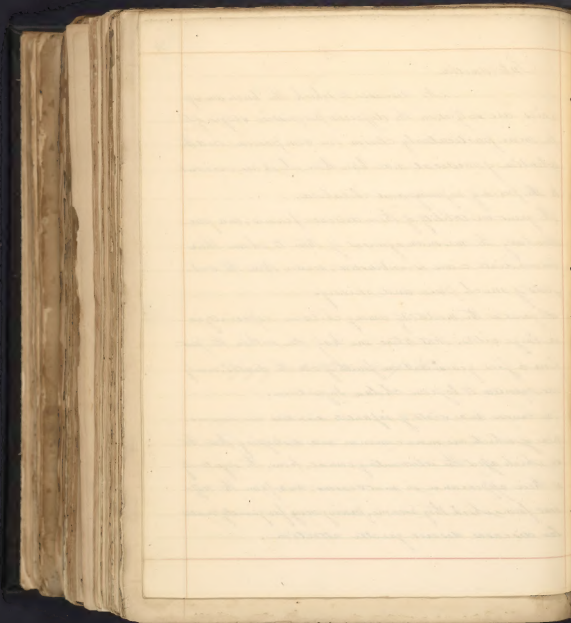
## Introduction

No diseases to which the human species are subject, in the different progressive stages of life, more particularly claim our compassion, and the attention of medical aid than those which are incident to the period of infancy and childhood.

The great vulnerability of their delicate frames, and particularly the mismanagement of those to whom their immediate care is entrusted, render them the subjects of much pain and misery.

A great is the mortality among children, especially in large cities. Not above one half die within the first four or five years; and one fourth of all the deaths nearly are reported to be from Cholera Infantum.

The causes and seats of infantile diseases are various; some of which are more common and distressing than those which affect the alimentary canal, from the regularity of their appearance in most seasons, and from the different forms which they assume, proving very frequently mortal. Few diseases deserve greater attention.





### Phlebotomy Infantum

This is a disease which prevails throughout these United States during the warmer months of summer and beginning of autumn, its march is rapid and traces of its severe inflictions, and widely spread desolations are annually apparent.

It makes its appearance sooner or later according to the season and section of country in which it is found with us it seldom shows itself before the middle of June, or the commencement of our summer months occasionally not ceasing its ravages before the colder days of autumn or the season of frost, it generally assumes a more dangerous aspect, in proportion as the heat of the season increases.

The temperature of the weather has a very considerable effect on this disease, great vicissitudes of heat and cold, sudden and long continued rains after a very dry state of the atmosphere, generally favour the operation of the exciting causes, hence the reasons why in some years it proves so alarming



and distressing, whilst in others, from the mild and more uniform temperature of the atmosphere, it is comparatively rare occurrence.

This disease may arise at any period of the infantile life, though we find it most generally occurs from the fifth to the twelfth month after birth to the third or fourth year, and is particularly fatal during the second summer.

Cholera Infantum does not appear to be a distinct disease from intermitting, and remitting fever, and cholera morbus in adults, but a variety of the same; this may be inferred from the same causes inducing these several diseases, with this difference only, that the exciting cause, with less force will produce morbid action in children who are predisposed to the disease.

Symptoms. It is sometimes ushered in by a diarrhoea which soon continues for several days without

• Underwood on the diseases of children.

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any other symptom of indisposition, but more common-  
ly makes its onset in a rapid and sudden man-  
ner, the child at once will be seized with a vom-  
iting and purging which continue together, a ten-  
dency with each other; the matter evacuated is  
more or less mixed with bile, its appearance is green  
or yellow; the stools however vary in their appearance,  
and have been distinguished into: vom, curdled,  
slimy, clayey, watery, and bloody.

In many instances the stools are large and foetid  
but in others they are without smell and consist chief-  
ly of the aliment as taken in without having under-  
gone any material change; (this in adults is called  
pyrosis) and in violent cases where the disease has  
run to a considerable length, some degree of tenes-  
mus will occur.

Urine is often discharged in different degrees  
of this disease.



The symptoms enumerated are accompanied with a fever which is of remitting kind, and discharges evident excretations especially in the evening, and like many other bilious disorders of the season is marked with morning remissions.

The pulse is generally small and quick, though sometimes full and hard, countenance pale, wan, and languid, eyes sunk and dull, temperature unequal, the abdomen often swollen and is remarkably hot, the child moans and sighs much, enjoys but little sleep, rolling about its head, or constantly putting its hands up to its face denoting a disorder of the brain.

One of the most frequent and distressing symptoms in this formidable complaint is a severe pain originating in the bowels, this may be known by the child starting, by frequent fits of crying and by forcible contraction of its arms and feet towards the stomach.





The duration of this disease is various, depending much on the manner in which it comes on, the habit and changes of weather &c.

If the first attack is with violence and left to nature, all the alarming symptoms exceedingly increase the strength of the patient is rapidly diminished, when a crueting comes on, attended with cold vertigo, cold extremities, and subsultus tendinum, which sometimes puts an end to the unhappy labour in the term of one day.

Hot and dry, a hot and moist, atmosphere seldom fails to increase the violence of the disease, whereas a cold day very frequently abates its violence, and disposes it to a favourable termination.

It continues in some instances with but few occasional alterations for six weeks, and even three or four months, before any considerable change takes



place, when the symptoms are more numerous and distressing, the body becomes emaciated to such a degree that the bones in some cases almost protrude through the skin; a constant inclination to stoop to his place though but little matter can be voided, and that of a watery consistence, or of a green colour.

The eyes become languid, and a sink deep within their sockets the features are contracted, and spots appear a sore mouth thick, convulsions and a strong, & marked Hippocratic countenance generally precede the total termination of this disorder.

### Treatment

As this disease like all other bilious disorders of the same season, is attended, with an inflammatory diathesis in the beginning; the first indications of cure, when we are called, early on to remove the exciting cause and lessen the morbid excitement, with these views, the first passages should



be immediately changed, of all offending matters;

second. In the commencement of the disease, when there is much febrile excitement, and especially if the child be of a plethoric habit blood letting may be resorted to, and occasionally repeated, with advantage, the incisive indications of the pulse are however not to be forgotten, upon the whole, local by means of leeches, when they can be procured is perhaps preferable in a majority of cases.

The bile and other acrid matters are to be evacuated by emetics and cathartics, of the first of these ipecacuanha is decidedly the mildest and best; exhibited early in the disease, the most tempestuous storms are to be expected from it: when there is much gastric irritation and spontaneous vomiting it is of course inauspicious. When, however, we are in the onset of the disease sometimes or discharging and urgent acts require every resource of our art.



the sometimes most severely scorched are as follows  
fig - lime water and milk. Liniment of oil of  
the sand aromatic herbs, the spice plaster. Lin ointment  
with camelline injections. Mustard to the arms legs and  
region of the stomach. By taking the determination  
of the alimentary canal, one attends with the  
most salutary effects.

The bowels should be opened by the use of gentle laxatives, such as castor oil with a little lavender or agnesia, or a solution of opium salts.

The system being prepared, we give calomel, in it we chiefly confide, as possessing properties eminently adapted to the disease; we do not estimate its effects, solely on account of its purgative qualities, its specific action on the glandular, and hepatic system, its power of exciting morbid reactions entitles it to our highest confidence given either alone or in combination with opium, aiprocac or

\* *elyse m. elasmus.*



both in proportion to the nature and urgency of the case it will rarely fail to bring down bilious stools. to a child in its second summer may be given calomel  $\frac{z\text{ss}}$  gum opii  $\frac{z\text{ss}}$  +  $\frac{ss}$   $\frac{ss}$  every three or four hours.

A late writer of considerable repute advises the administration of calomel in minute doses, such as the  $\frac{1}{4}$  of a grain every half hour and its effects in this way are often exceedingly beneficial.

But when the spontaneous discharges have been considerable from the alimentary canal producing a prostration of strength, fullness of pulse, and a coldness of the extremities, we may conclude that the disease has already sufficiently (or too much) seduced the system, and that all further evacuations by artificial means would be highly improper, because must now be had to remedies to retard the diarrhoea and support the strength of the patient viz. opium and chalk with sugar.

†• Chapman.

laudanum and cinnamon water formed into a  
 pulp will be found useful. ℞j Opia. ppt. ℥ij ℞  
 pū ℥xv. sac. alb ℥j. Ag cinnamon ℥ij dose  
 decot spoonful every 3 or 4 hours, the vegetable alkali  
 in the following manner may sometimes be given  
 with a good effect. ℞ sac. tart ℥j ℞ opū ℥xv. sac.  
 alb ℥j ag. fortana ℥ij dose the same as above.  
 But oil is also useful here ℞ Rad. Rhiz ℥x. Calceap.  
 ℥xj. ℞ opū ℥xv. di. anis ℥x. sac alb ℥j, ag. fort.  
 ℥ij. dose the same as above when the stools  
 are very frequent, Alum in the dose of one grain or  
 two with the & a's of a grain of opium is useful  
 ℞ Tinct. infusion of galls with laudanum and co-  
 lumbe is useful. the infusion of log-wood in the dose  
 of a decot spoonful as recommended by Dr. Thwack  
 may be used with advantage. the infusion of the  
 dew-berry made by pouring one pt. of boiling water on  
 one ounce of the bruised root, as recommended by Dr.  
 Chapman in the dose of a decot spoonful pro se  
 nata - is an invaluable remedy.



Demulcents and diluting drinks, such as thin barley water, rice gruel, infusion of slippery elm bark &c. are highly useful, given in small quantities at a time and frequently repeated, glysters of mutton broth, or flaxseed tea, or starch dissolved in water with a few drops of laudanum, will often give ease and produce other beneficial effects. The flannel roller is highly recommended by Dr. Whippleman many years since, is an invaluable remedy in this, as in every other stage of the disorder.

When the violent convulsive action of the stomach and bowels are subdued, the strength of the patient must be supported by the use of tonic, and cardiacal remedies, bark or which is far better, and easier to be administered, the sulphate of quinine made into an emulsion; columbo root in tincture or decoction with a little laudanum; pnt. wine, or claret, weak brandy and water &c. &c. but let whatever is given be in small quantities and often repeated, otherwise



the stomach will reject it, what appears to be of great importance in this disease (as well as excitation) is a proper regulation of air. This branch of the *Medicina interna* has certainly been much neglected, and how far a particular regimen would be in curing disease is not known; but I suspect it would go much further than has yet been tried. I believe in this stage of the complaint our dependance may rest much on air; and particularly if we can with it, have recourse to country air. In patients with most frequently rapidly regain strength, with no other remedy.

The air should be first of a gently stimulating kind: is the child not weaned the milk of the mother is the best, if it is some of the farinaceous substances may be employed with advantage such as rye, tapioca, barley, &c. &c. cracked & boiled down to a mush and boiled with milk, or which Dr. Chapman says is best, *Stomachicis* in a cloth in for a thin house, until it is —





perfectly hard than to be grated in milk.

In diet four animals should be first chosen viz: beef, mutton, and cod fish, and crushed, pick or stew till they be retained, when every thing will be good, from these we may gradually increase to more nourishing articles of food viz meats boiled, and roasted.

Before concluding these observations it may not be altogether inappropriate to say a few words on the dietetic treatment of Cholera Infantum, in which I acknowledge myself almost entirely indebted to a paper with which Dr Farish has lately favoured the public.

Diet. Keep the child cool, and expose him to fresh air, for this purpose he should be carried frequently into the open country, or beyond the suburbs of the city.

the child. Pay no attention to bedding, instead of a feather bed the child should be placed on a hard mattress or on blankets folded and laid upon the floor, the doors and windows open, so that fresh



air may be freely admitted.

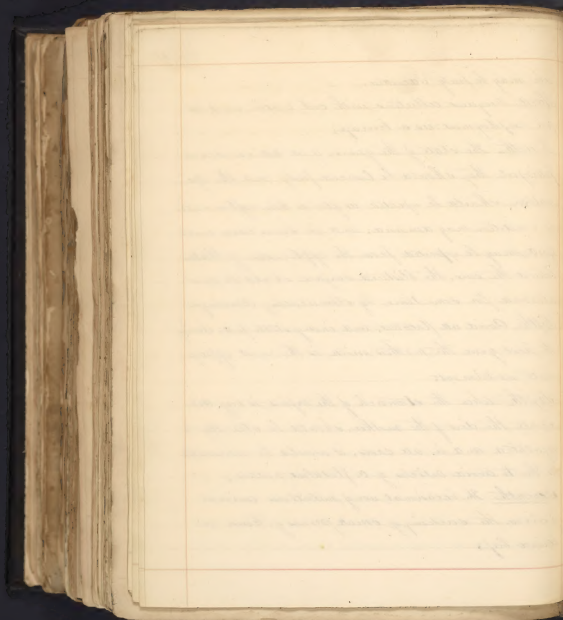
Third. frequent ablutions with cool water, and its free employment as a beverage.

Fourth. the state of the gums, if at all swollen or painful, they should be lowered gently, and the operation should be repeated as often as their inflammatory condition may demand; and in severe cases, much good may be expected from the application of blisters behind the ears, the blistered surface should be maintained for some time by stimulating dressings;

Fifth. Avoid all flatulents, and indigestible food; during the first year the mother's milk is the most appropriate nutriment.

Sixth. when the stomach of the infant is very delicate the diet of the mother, should be strictly regulated and in all cases, it would be advisable for her to avoid articles of a flatulent nature;

Seventh. the occasional use of nutritious animal juices. the sucking of small pieces of Ham or dried beef;



Eighth. Quinatics should be used habitually during the summer, in those cases where there is reason to apprehend the occurrence of cholera.

Ninth. The cold bath daily.

Tenth. The flannel roller next to the skin.

Eleventh. Always let animal food enter into the diet of the child after weaning.

Finis

17  
The first of the month of June  
the weather was very warm  
and the wind was from the  
south. The water was very  
calm. The ship was at anchor  
in the harbor. The crew was  
very busy. The ship was  
very comfortable. The food was  
very good. The crew was  
very friendly. The ship was  
very safe. The crew was  
very happy. The ship was  
very successful. The crew was  
very brave. The ship was  
very strong. The crew was  
very smart. The ship was  
very fast. The crew was  
very hard working. The ship  
was very well managed. The  
crew was very well trained.  
The ship was very well equipped.  
The crew was very well paid.  
The ship was very well maintained.  
The crew was very well respected.  
The ship was very well known.  
The crew was very well liked.  
The ship was very well loved.  
The crew was very well valued.  
The ship was very well honored.  
The crew was very well praised.  
The ship was very well praised.  
The crew was very well praised.

June